DRINK-THROUGH LID SEAL AND METHOD OF USE

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PRIORITY CLAIM

This application is a continuation-in-part of prior U.S. application no. 10/061,980, filed January 31, 2002.

FIELD OF THE INVENTION

This invention relates generally to disposable beverage container lids and, more specifically, to devices for sealing such lids to prevent spillage.

BACKGROUND OF THE INVENTION

Coffee shops, take-out restaurants, and other establishments commonly serve beverages in disposable cups having plastic lids. In most cases, the lids include an opening allowing the consumer to drink the beverage through the lid, without removing it. Examples of such lids are disclosed, for example, in U.S. Patent No. 4,589,569 to Clements; U.S. Patent No. 4,333,583 to Montemarano, and U.S. Patent No. 5,253,781 to Van Melle et al.

The various lids address a variety of concerns, such as the ideal shape of a lid to accommodate a typical human mouth or the extent to which the lid should be raised to allow

for beverages topped with whipped cream or foam, but they do not adequately address the problem of spillage that comes with such lids.

Common to all of the drink-through lids is the inclusion of an opening to allow the beverage to be consumed through the lid. While the opening makes it convenient to drink the beverage without removing the lid, it also makes the beverage prone to spillage when transporting it from the point of purchase to any other location.

Consequently, there is a need for a device that is able to seal beverage lids to prevent spillage without detracting from the convenience of a drink-through beverage lid.

SUMMARY OF THE INVENTION

The present invention comprises a cover for a drink-through beverage cup lid. In a preferred embodiment, the invention comprises a substantially flat plate having a generally orthogonal projection that is sized and shaped to extend into the opening of a typical drink-through lid. The seal is inserted into the lid during transport, and is easily removable to allow the beverage to be consumed.

In accordance with further aspects of the invention, the cup seal may be either attached to the drink-through lid, detachable from the lid, or produced as a separate component.

In accordance with other aspects of the invention, the seal may take other forms, including that of a lid having the same general shape as a drink-through lid but without a drink-through opening. In this embodiment, the seal is placed over the entire drink-through lid to prevent spillage.

In accordance with still further aspects of the invention, the seal plate can be somewhat larger than the raised portion of the drink-through lid so that it can be easily removed.

In accordance with yet other aspects of the invention, the seal is made from a flexible material.

In accordance with still another aspect of the invention, a surface of the seal includes a space for a logo, advertisement, or removable sticker that can be used to reveal game prize winners.

BRIEF DESCRIPTION OF THE DRAWINGS

The preferred and alternative embodiments of the present invention are described in detail below with reference to the following drawings.

FIGURES 1A-B are perspective views of a preferred cup seal in use with a drinking cup and drink-through lid;

FIGURE 2 is a perspective view of an alternate embodiment for a cup seal in use with a drinking cup and drink-through lid;

FIGURE 3 is a perspective view of an alternate embodiment for a cup seal in use with a drinking cup and drink-through lid; and

FIGURE 4 is a flow diagram for a preferred method of using a cup seal.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

FIGURE 1A illustrates a cup 10 having a removable drink-through lid 20. The lid 20 is removable, and includes a raised drink-through spout 22 having an opening 26. The beverage in the cup 10 may be consumed directly through the opening 26 or through a straw inserted into the opening 26. The lid 20 also includes a raised portion 24 to allow the lid to accommodate beverages with foam or other toppings. A small vent 28 is included on the raised portion 28 to allow for the flow of air when drinking.

The lid 20 may differ from that illustrated in FIGURE 1A, consistent with this invention. For example, the lid need not include a spout 22, raised portion 24, or vent 28. Likewise, the spout can take any shape other than that illustrated, so long as it also includes a drink-through opening. For that matter, the drink-through opening need not be on a raised spout, but rather can reside on a generally flat lid or on a recessed portion of a lid. An example of an alternative form of cup lid is shown in FIGURE 1B. The lid of FIGURE 1B

includes a rim 27, a trough 29, and an oval-shaped opening 26. Unlike the lid of FIGURE 1A, the lid of FIGURE 1B incorporates the spout within the rim 27.

Further, the lid 20 illustrated in FIGURE 1A is the type typically used with disposable cups. As yet another alternative, the lid 20 can be a re-useable lid such as that on a non-disposable commuter mug.

The seal 30 includes a generally flat plate 32 having an orthogonal projection 34. The plate 32 is sized and shaped to generally cover the top of the spout 22 of the lid 20. Likewise, the projection 34 has a cross-sectional shape (in a plane substantially parallel to the plate 32) that substantially matches the shape of the opening 26. As shown in FIGURE 1A, the projection and opening are round. In other embodiments, the projection 34 has an oval cross-section or any other shape to correspond to the expected shape of a drink-through lid opening, such as the oval opening 26 in the lid of FIGURE 1B. The projection need not have any specific length, but it preferably is capable of extending through the opening 26 sufficiently far to seal the opening and to frictionally retain the seal 30 on the spout 22. Likewise, although the projection is shown as having sidewalls that are substantially parallel (forming a cylinder in FIGURE 1A), they may be tapered to enhance the ability of the seal to be retained within the spout and also to allow a single seal 30 to accommodate lids 20 having openings of different sizes. Such a projection is tapered so that it has a larger circumference at the end adjacent the plate 32 and a smaller circumference at the end opposite the plate 32.

The plate 32 is preferably shaped to extend at least partially beyond the top edge of the spout 22 to facilitate easy removal. Because it is preferably constructed from rubber or other flexible materials, this shape allows the seal 30 to be grasped and pried upward for removal. It may, however, be formed of any materials, including plastic (hollow or solid), wood, cork, or others. Accordingly, as depicted in FIGURE 1A, the preferred shape is triangular with rounded corners. As an alternative, the plate 30 can be in the shape of a coffee bean or other object indicative of the beverage or store selling it. Any other shape will work,

however, so long as the seal 30 is removable and will close the opening 26. At one extreme, the plate 32 is not used at all. In such an embodiment, the projection is extendible downward into the lid, while another projection remains above the lid when the seal is in place, providing a means for grasping the seal for removal.

The seal 30 can be formed in any color, and is preferably constructed of rubber or other material. By using a variety of colors, coffee houses can color-code the drinks they sell by, for example, using a black seal for black coffee, a brown seal for a mocha, and other colors to represent other aspects. Likewise, the substantially flat top surface of the plate 32 can be used for trademarks, logos, or other indicia.

The top surface of the plate 30 can alternatively include a peel-off sticker so that the seal 30 can be used as a promotional game piece. Removing the sticker reveals the results (e.g., instant winner, try again, etc.) that are printed on or attached to the top surface of the plate 30.

An alternate embodiment of the lid seal 30 is depicted in FIGURE 2. In this embodiment, the seal 30 is attached to the lid 20 via an arm 36. Because the arm 36 is attached to the lid 20, it is preferable to manufacture it from the same material rather than to make it separately and attach it. Typical lids are made from a relatively thin plastic that is sufficiently flexible (either naturally or by the use of perforations, scoring or other means) that the arm 36 can be extended upward to engage the seal 30 with the opening 26. To facilitate drinking, the seal 30 is removed and allowed to extend downward. The inclusion of the arm 36 retains the seal so that it does not fall to the ground and need not be held separately while drinking. While the arm 36 is shown as extending from a lower edge of the lid 10, it can be attached to the lid at any point so long as the arm 36 allows the seal to reach the opening 26. Likewise, the arm 36 can be any length, so long as the seal is capable of reaching the opening 26.

Yet another embodiment is depicted in FIGURE 3. In this embodiment, the seal takes the form of a lid cover 40. The lid cover 40 is sized and shaped to fully cover an existing drink-through lid, and therefore (for a lid such as that of FIGURE 1A) includes a raised section and spout, as appropriate. An annular lid-engaging section 46 connects with a corresponding section on the drink-through lid 20. The principal difference, however, is that the lid cover has no opening such as the opening 26 found in the drink-through lid. Thus, by attaching the lid cover 40 to the lid 20, the opening 26 is sealed, preventing spillage.

In one form of the lid cover 40, the lid cover also includes a projection 42 extending downward from the top of the spout section 44 of the lid cover 40. When the lid cover 40 is placed over the lid 20, the projection 42 mates with the opening 26 to form a relatively tight seal. In this form of the embodiment, the projection 42 prevents leakage between the lid 20 and lid cover 40, keeping the lid 20 relatively clean during transport.

Figure 4 depicts a preferred method of using a lid seal. The method begins by providing a beverage cup 102 such as the cup 10 depicted in Figure 1. The cup is then filled 104 with a beverage such as coffee, tea, juice, or any other liquid. Once filled, the lid 20 is placed on the cup 106. The lid includes a drink-through spout so that it generally encloses the cup except for the drink-through spout 26.

In order to seal the cup, a seal 30 is placed on the lid to seal it and prevent spillage. Thus, in block 108 an appropriate seal is chosen from a plurality of seals designed to enclose a drink-through opening. The seals are interchangeable, so that any one of the plurality of seals will suffice. In various alternate embodiments, as described above, the selection of a particular seal may be based on a color coding (e.g., different colors depending on the particular beverage in the cup), use of logos, or other aspects. Thus, in this form, any cup, lid, and seal may be combined and a particular combination may be made as a function of the beverage in the cup. Alternatively, a bin of seals may be placed in a location accessibly by

consumers of the beverages, so that consumers can optionally select a seal if desired. Once the seal is chosen, it is placed on the lid 110 to seal the cup.

While the preferred embodiment of the invention has been illustrated and described, as noted above, many changes can be made without departing from the spirit and scope of the invention. Accordingly, the scope of the invention is not limited by the disclosure of the preferred embodiment.